

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A mobile communication system including a radio base station apparatus for determining uplink reception synchronization by using a pilot symbol of DPCCH (Dedicated Physical Control Channel) from a mobile station, the system comprising: means for re-encoding a TFCI (Transport Format Combination Indicator) value that has been once decoded and comparing the re-encoded TFCI value with a TFCI symbol received from the mobile station; and determination means for using the number of TFCI error bits resulting from the comparison to determine uplink reception synchronization.

2. (original): The mobile communication system according to claim 1 further comprising means for computing a characteristic indicator value from a decoding characteristic resulting from Hadamard transform used in decoding the TFCI value, wherein the characteristic indicator value is used to determine uplink reception synchronization.

3. (original): The mobile communication system according to claim 2 further comprising control means for determining whether or not to use a reception SIR (Signal to

Interference power Ratio) value computed with the pilot symbol, the number of pilot error bits of the pilot symbol, the number of the TFCI error bits, and the characteristic indicator value for the determination of uplink reception synchronization, depending on a radio environment.

4. (original): A radio base station apparatus for determining uplink reception synchronization by using a pilot symbol of DPCCCH (Dedicated Physical Control Channel) from a mobile station, the apparatus comprising:

means for re-encoding a TFCI (Transport Format Combination Indicator) value that has been once decoded and comparing the re-encoded TFCI value with a TFCI symbol received from the mobile station; and

determination means for using the number of TFCI error bits resulting from the comparison to determine uplink reception synchronization.

5. (original): The radio base station apparatus according to claim 4 further comprising means for computing a characteristic indicator value from a decoding characteristic resulting from Hadamard transform used in decoding the TFCI value,

wherein the characteristic indicator value is used to determine uplink reception synchronization.

6. (original): The radio base station apparatus according to claim 5 further comprising control means for determining whether or not to use a reception SIR (Signal to Interference power Ratio) value computed with the pilot symbol, the number of pilot error bits of the pilot symbol, the number of the TFCI error bits, and the characteristic indicator value for the determination of uplink reception synchronization, depending on a radio environment.

7. (original): A method for determining uplink reception synchronization in a mobile communication system including a radio base station apparatus for determining uplink reception synchronization by using a pilot symbol of DPCCH (Dedicated Physical Control Channel) from a mobile station, the method comprising the steps, in the radio base station apparatus, of:

re-encoding a TFCI (Transport Format Combination Indicator) value that has been once decoded and comparing the re-encoded TFCI value with a TFCI symbol received from the mobile station; and

using the number of TFCI error bits resulting from the comparison to determine uplink reception synchronization.

8. (original): The method for determining uplink reception synchronization according to claim 7, further comprising the step of computing a characteristic indicator value from a

decoding characteristic resulting from Hadamard transform used in decoding the TFCI value,

wherein the characteristic indicator value is used to determine uplink reception synchronization.

9. (original): The method for determining uplink reception synchronization according to claim 8, further comprising the step of determining whether or not to use a reception SIR (Signal to Interference power Ratio) value computed with the pilot symbol, the number of pilot error bits of the pilot symbol, the number of the TFCI error bits, and the characteristic indicator value for the determination of uplink reception synchronization, depending on a radio environment.

10. (new): The mobile communication system according to claim 2, wherein said characteristic indicator value is equal to $10 \times \log (C/D)$, wherein:

C is equal to peak value of absolute values of correlation values obtained from said Hadamard transform, D is the average of noise components and is equal to $(B-C)/32$, and B is equal to sum total of absolute values of correlation values obtained from said Hadamard transform.

11. (new): The radio base station apparatus according to claim 5, wherein said characteristic indicator value is equal to $10 \times \log (C/D)$, wherein:

C is equal to peak value of absolute values of correlation values obtained from said Hadamard transform, D is the average of noise components and is equal to $(B-C)/32$, and B is equal to sum total of absolute values of correlation values obtained from said Hadamard transform.

12. (new): The method for determining uplink reception synchronization according to claim 8, wherein said characteristic indicator value is equal to $10 \times \log (C/D)$, wherein: C is equal to peak value of absolute values of correlation values obtained from said Hadamard transform, D is the average of noise components and is equal to $(B-C)/32$, and B is equal to sum total of absolute values of correlation values obtained from said Hadamard transform.